

## Claims

1. A semi-enclosed gel system for release of volatile materials, wherein the  
5 dimensions of the gel system, in the x, y, and z dimensions, are such that:

- a.  $x_l / y_l > 1.5$ , preferably  $> 2.0$ , and most preferably  $> 5.0$ ,
- b.  $H_l / z_l > 2.0$ , preferably  $> 4.0$ , and most preferably  $> 5.0$ ,
- c.  $x_F / y_F > 2.0$ , preferably  $> 5.0$ , and most preferably  $> 20.0$ ,
- d.  $\frac{(A_D)_{final}}{(A_D)_{initial}} > 0.19$ , preferably  $> 0.4$ , most preferably  $> 0.7$ ,  
10  $\frac{(A_P)_{final}}{(A_P)_{initial}}$

wherein:  $A_D$  = Surface Area of the gel that is directly exposed to  
ambient flowing air

$A_P$  = Area available for permeation of vapors generated within  
the enclosure

- e.  $\frac{(A_D)_{final}}{(A_D)_{initial}} > 0.65$ , preferably  $> 0.75$ , and most preferably  $> 0.9$ , and  
15  $\frac{(A_P)_{final}}{(A_P)_{initial}}$
- f.  $\frac{(A_P)_{final}}{(A_P)_{initial}} < 4.0$ , preferably  $< 3.5$ , and most preferably  $< 1.5$ .

20 wherein:

$x_l$  = the longest dimension measured in the x direction of the projection of  
the directly exposed region of the gel system in the x-z plane at the  
initiation of volatilization;

25  $y_l$  = the longest dimension measured in the y direction of the projection of  
the directly exposed region of the gel system in the x-y plane at the  
initiation of volatilization;

$z_l$  = the longest dimension measured in the z direction of the projection of  
the directly exposed region of the gel system in the x-z plane at the  
30 initiation of volatilization;

$H_l$  = the longest dimension measured in the z direction of the projection of  
the entire gel system in the x-z plane at the initiation of volatilization;

$x_F$  = the longest dimension measured in the x direction of the projection of

the directly exposed region of the gel system in the x-z plane at the end of volatilization;

5        $y_F$  = the longest dimension measured in the y direction of the projection of the directly exposed region of the gel system in the x-y plane at the end of volatilization;

$z_F$  = the longest dimension measured in the z direction of the projection of the directly exposed region of the gel system in the x-z plane at the end of volatilization; and

10       $H_F$  = the longest dimension measured in the z direction of the projection of the entire gel system in the x-z plane at the end of volatilization.

2.      The semi-enclosed gel system of claim 1, wherein:

- a. the ratio of final to initial values of  $A_D$  is greater than 0.65;
- b. the ratio of final to initial value  $A_p$  is less than 4.0; and
- c. the aspect ratio of the cross-section of the gel is greater than 1.5.

15      3.      The semi-enclosed gel system of claim 2, wherein said volatile material is selected from the group consisting of materials employed for air freshening, insect control, and odor abatement.

20      4.      The semi-enclosed gel system of claim 2, wherein said volatile material is a fragrance.